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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,646	12/29/2003	Jasvantrai Shah	RIC99067	5723
25537 VERIZON PATENT MANAGEMENT GROUP 1320 North Court House Road 9th Floor ARLINGTON, VA 22201-2909	7590 07/24/2009		EXAMINER WOLDEKIDAN, HIBRET ASNAKE	
			ART UNIT 2613	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/747,646

Applicant(s)

SHAH, JASVANTRAI

Examiner

Hibret A. Woldekidan

Art Unit

2613

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges receipt of Applicant's Amendments, remarks, arguments received on 6/3/09. Applicant's arguments have been considered but are not persuasive.

Applicant's arguments and Examiner's Response

Applicant's argument-I

1. Applicant argued on Page 11 of the remark regarding the rejection of claim 1 and its dependent claims under 35 U.S.C. 112, first paragraph, "...*For example, Fig. 3C clearly shows that the input working port (215) is directly connected to the input protection port (210). (See also, p. 6, lines 22 and 23, p. 7, lines 2-4 and Fig. 4.) Therefore, Applicant submits that claim 1 and its dependent claims comply with the written description requirement of 35 U.S.C. § 112, first paragraph. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of claim 1 and its dependent claims under 35 U.S.C. 112, first paragraph...*"

Examiner's Response:

Examiner respectfully disagree and maintain the rejection of claim 1 and its dependent claims under 35 U.S.C. 112, first paragraph because fig. 3c shows the input working port of the OXC is being connected to the output port of the OXC then to the input protection port of the router. Fig. 4(See box 415) also states the OXC connects

protection port to working port. Further, the signal entering and exiting point of the OXC is considered as a port. For example, Pedersen et al(US 2003/0067655) teaches the signal enter point of the OXC(100) is called an input port(101) and the signal exiting point of the OXC is called an output port(103)(See fig. 11 Paragraph 45). Therefore signal entering or exiting point of the OXC can be considered as an input or output port respectively.

In the current application, none of the figures or any part of the enclosed specification of the current application states direct connection between the input working port of the OXC is being directly connected to the protection port of the Router.

Therefore the argued feature is not persuasive and examiner maintains the rejection of claim 1 and its dependent claims under 35 U.S.C. 112, first paragraph .

Applicant's argument-II

2. Applicant argued on Page 12 of the remark, "...Erickson does not disclose or suggest causing an input working port of the OXC to directly connect to an input protection port of the router in response to detection of the signal..."

Examiner's Response:

Examiner respectfully disagrees because, in the remark(See Page 11 Paragraph 2), applicant considers fig. 3c of the current application shows a direct connection, "...fig. 3c clearly shows that the input working port(215) is directly connected to the input protection port(210)..."

Similarly to fig. 3c of the current application, Ericson shows in fig. 17 b due to the failure on the upstream path(1702), the input working port of the OXC(1541B) in the upstream direction is connected to the input protection port of the router(1522).

As explained in *Erickson*, After a connection failure being detected and signaled to the OXC and the router being (See Col. 23 lines 28-32) a path switching take placed from the failed path to another path. As further illustrated in fig. 17b. due to the failure on path(1702), the input working port of the OXC(1541B) in the upstream direction connects to the input protection port of the router(1522). Therefore, the argued feature, "...*Erickson does not disclose or suggest causing an input working port of the OXC to directly connect to an input protection port of the router in response to detection of the signal...*" is not persuasive.

Applicant's argument-III

3. Applicant stated on Page 14 third Paragraph of the remark, "...*The Examiner alleges that port (1541B) of ERICKSON corresponds to the claimed, "input working port" - a point that Applicant does not concede...*"

Examiner's Response:

Examiner respectfully disagrees because as shown in fig. 15 of Erickson, during normal operation, signals transmitted in the upstream and downstream directions through working path(1551,1551',1506,1506') between working port(1531A) and port (1541b) of the OXC and working port(1521A) of the router(1502). The path 1551,1551' ends transmission when there is a failure at working path 1602 of fig. 16a(See Col. 22 lines 43-44,fig. 16a,b).

Since during normal operation the port(1541B) of the OXC(1504) input data from the network in the up stream direction and transmit the inputted data to the router(1502) through working path(1551,1551',1506,1506' of fig. 15), it can be considered as input working port of the OXC. Therefore the argued feature is not persuasive.

Applicant's argument-IV

4. Regarding the applicant's arguments of claim 11 on page 21, the argument is moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 112

Claims 1-10,15-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The independent claims, 1,6 and 15 state, "...the working port of the OXC is directly connected to the protection port of the router..." The term "directly" is not stated in the specification. The specification states the working port of the OXC is connect to a protection port of the router. The specification does not state the working port of the OXC is directly connected to the protection port of the router. See Fig 3A-C, connection between ports is through the output ports of the OXC. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A Person shall be entitled to a patent unless-

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-10 and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Erickson et al (6,882,765).

Considering claim 1, Erickson discloses in a network including a router and an optical cross-connect system (OXC) **(See Col. 19 lines 1-6, fig. 17b i.e. a network comprising a router (1502) and OXC(1504))**, a method for responding to a failure **(See Col. 23 lines 1-5 and lines 28-41, fig. 17b i.e. a method of responding to a failure)**, the method comprising: detecting the failure in the router **(See Col. 22 lines 64-67, fig. 17b i.e. detecting a failure in the router(1502) by a port 1521A)**; sending a signal from the router to the OXC **(See Col. 23 lines 1-8, fig. 17b i.e. after the**

router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC)), where the signal indicates the failure (See Col. 23 lines 1-8 and lines 28-41, fig. 17b i.e. sending failure indicating signal from the router(1502) to the oxc(1504)); causing an input working port of the OXC to connect to an input protection port of the router in response to detection of the signal(See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b illustrates that after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504), as a result, an input working port of the OXC in the upstream direction from the network1541B) connects to the input protection port of the router(1522)); and transmitting data from the router to the OXC via the input protection port(See Col. 23 lines 34-41, fig. 17b i.e. fig. 17 the OXC working port(1541B) connects to the router protection port(1522) to transmit signal via the protection port. Further the OXC and the router transmit signals bidirectional. Therefore the router also transmits signals to the OXC and vise versa).

Considering claim 2 Erickson discloses the method of claim 1, where the sending further comprises: of sending an in-band signal, from the input protection port of the router, to the OXC (See abstract, Col. 25 lines 53-57(claim 14), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. sending failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel is an in-band signaling channel(See Col. 25 lines 44-47). The in-band signaling channel is a dedicated signaling link used in parallel with each of the working link(See Col. 25 lines 53-57(claim 14)). This shoes that the signaling channel is

transmitted not using a working channel but using a spare channel. Erickson further discusses providing signaling interface a protection or a spare path(See Col. 18 lines 29-31)).

Considering claim 3 Erickson discloses the method of claim 2, where the sending an in-band signal to the OXC further comprises: sending a Synchronous Optical Network (SONET) signal to the OXC (See abstract, Col. 20 lines 5-10 i.e. **Communicating SONET channels with the OXC).**

Considering claim 4 Erickson discloses, the method of claim 1, where the sending further comprises: sending an out-of-band signal, from the input protection port of the router, to the OXC (See abstract, Col. 25 lines 22-24(claim 8), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. An out of band channel or an in band channel can be used to indicate connection failure(See abstract). Erickson further discussed, sending a failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel can be an out-of-band signaling channel(See Col. 25 22-24(claim 8), Col. 28 lines 27-31). The out-of-band signaling channel is a dedicated signaling link (See Col. 19 lines 13-18)). This shows that the signaling channel is transmitted not using a working channel but using a spare channel. Erickson further discusses providing signaling interface a protection or a spare path(See Col. 18 lines 29-31)).

Considering claim 5 Erickson discloses, the method of claim 4, where the sending an out-of-band signal comprises: the step of addressing the out-of-band signal

to an Internet Protocol address associated with the OXC (**See Col. 19 lines 1-9 i.e. internet protocol associated with OXC**).

Considering claim 6 Erickson discloses, a method for responding to a failure in a network including a router and an optical cross-connect system (OXC) (**See Col. 23 lines 28-41 i.e. a method of responding to a failure in a network including a router and OXC**), the method comprising: receiving a signal at the OXC from the router (**See Col. 23 lines 1-5 i.e. after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the oxc(1504)**), the signal indicating a failure of a working port in the router (**See Col. 23 lines 1-5 and lines 28-30, fig. 17B i.e. a failure indication signal sent from the router(1502) to the oxc(1504)**); and connecting a protection port of the router directly to a working port of the OXC in response to receiving the signal in response to receiving the signal (**See Col. 23 lines 1-5 and lines 28-41, fig. 17b i.e. after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the oxc(1504). In response, the OXC working port(1541B) connects to the router(1502) protection port(1522)**).

Considering claim 7 Erickson discloses the method of claim 6, where the receiving further comprises: receiving an in-band signal, from the input protection port of the router, at the OXC (**See abstract, Col. 25 lines 53-57(claim 14), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. receiving failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) and this signaling channel is an in-band signaling channel(See Col. 25 lines 44-47). The in-band signaling channel is a dedicated signaling link used in parallel with each of the working link(See Col. 25 lines 53-**

57(claim 14)). This shows that the signaling channel is transmitted not using a working channel but using a spare channel. Erickson further discusses providing signaling interface a protection or a spare path(See Col. 18 lines 29-31)).

Considering claim 8 Erickson discloses the method of claim 7, where the receiving an in-band signal at the OXC comprises: receiving a Synchronous Optical Network (SONET) signal at the OXC (See abstract, Col. 20 lines 5-10 i.e. **Communicating SONET channels with the OXC).**

Considering claim 9 Erickson discloses the method of claim 6, where the receiving further comprises: receiving an out-of-band signal, from the input protection port of the router, at the OXC (See abstract, Col. 25 lines 22-24(claim 8), Col. 23 lines 2-5, Col. 25 lines 44-47 i.e. An out of band channel or an in band channel can be used to indicate connection failure(See abstract). Erickson further discussed, receiving a failure signaling channel from the router to the OXC(See Col. 23 lines 2-5) to inform connection failure and this signaling channel can be an out-of-band signaling channel(See Col. 25 22-24(claim 8), Col. 28 lines 27-31). The out-of-band signaling channel is a dedicated signaling link (See Col. 19 lines 13-18)). This shows that the signaling channel is transmitted not using a working channel but using a spare channel. Erickson further discusses providing signaling interface a protection or a spare path(See Col. 18 lines 29-31)).

Considering claim 10 Erickson discloses, the method of claim 9, where the receiving an out-of-band signal further comprises: addressing the out-of-band signal to

an Internet Protocol address associated with the OXC (**See Col. 19 line 1-9 i.e. internet protocol associated with OXC**).

Considering claim 15, Erickson discloses a communications network for transmitting data (**See fig. 7 i.e. optical network for transmitting data**), the communication network comprising: a router for receiving the data from a terminal (**See Col 19 lines 1-7 a router for receiving a data from other units**), the router comprising: an input working port to receive the data from the terminal (**See Col. 19 lines 5-6, Col. 20 lines 22-26, fig. 17B i.e. working port(1521) in the router(1502) for communicating signals**); and an input protection port to receive the data from the terminal in response to a failure of the working unit or path(**See fig. 17b, Col. 23 lines 34-40 i.e. protection port(1522) for receiving the data in response to a failure in the working unit or path(1702)**); and an optical cross-connect system (OXC) to receive the data from the router (**See Col. 19 lines 1-7, fig. 15 elements 1504 i.e. OXC for receiving data from the router**), the optical cross-connect system comprising an input working port (**See fig. 17B i.e. OXC comprising working port(1541B)**), where the working port of the OXC is directly connected to the protection port of the router in response to a signal received from the router indicating the failure of the input working port of the router (**See Col. 23 lines 28-41, fig. 17b i.e. fig. 17 b illustrates that after the router(1502) detects a failure in one of the links(1702), the router(1502) sends a signal to the OXC(1504), as a result, the input port of the OXC working port(1541B) in the upstream direction is connected to the router input protection port(1522)**).

Considering Claim 16 Erickson discloses the communications network of claim 15, where the router transmits a signal indicating the failure to the OXC, the signal causing the OXC to connect the input protection port to the input working port of the OXC **(See Col. 23 line 6-27, fig. 15 i.e. router transmit signal incase of a failure).**

Considering claim 17 Erickson disclose, the communications network of claim 16, where the signal is an in-band signal **(See abstract i.e. in-band signal)**

Considering claim 18 Erickson disclose, the communications network of claim 17, where the in-band signal is a Synchronous Optical Network (SONET) signal **(See Col. 20 lines 5-10 i.e. SONET channels)**

Considering claim 19 Erickson discloses the communications network of claim 16, where the signal is an out-of-band signal **(See Abstract, Col. 2 lines 63-67 and Col. 3 lines 1-3, Col. 16 i.e. an out-of-band signal).**

Considering claim 20 Erickson discloses, the communications network of claim 19, where the out-of-band signal is addressed to an Internet Protocol address associated with the OXC **(See Col. 19 lines 1-9 i.e. internet protocol associated with OXC).**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al (US 2002/0063916) in view of Pan (7,274,869)

Considering claim 11, Chiu discloses an optical cross-connect system (See fig. 3 i.e. OXC(OXC_B)) comprising: a spare port to transmit data from a router (See Paragraph 47,45, fig. 3,6 i.e. As shown in fig. 3, the OXC(OXC_B) has a port to communicate with a redundant router(100_{B2}), this port is considered as a protection port. Further Paragraph 45, discusses as a result of a working router(100_{B1}) failure, a new light path link is established between the OXC(OXC_B) and the redundant router(100_{B2}). Therefore the OXC(OXC_B) port that connects the newly established path between the OXC and the redundant router(100_{B2}), is considered as a protection port); and a working port to transmit data from a primary router (See Paragraph 38,47,45, fig. 3,6 i.e. fig. 3 Since the OXC(OXC_B) has a port to communicate with a working router(100_{B1}), this port is considered as a working port), where the working port is connected to the router in response to a failure of the primary router(See Paragraph 47, fig. 3,6 i.e. fig. 3 illustrates that backup or the protection router(100_{B2}) is activated when the working router(100_{B1}) failed).

Chiu does not specifically disclose transmitting a low priority data using a spare port and transmitting a high priority data using a working port.

Pan teaches transmitting low priority data using a spare port and transmitting high priority data using a working port (See Col. 15 lines 4-8 and lines 24-27 i.e. primary path for high priority data and alternative or spare path for non priority data).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu, and transmit a low priority data using a spare port and a high priority data using a working port, as taught by Pan, thus providing an efficient data transmission system by prioritizing data, as discussed by Pan (**Col. 2 lines 32-35 and Col. 3 lines 38-41**).

3. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al (US 2002/0063916) in view of Pan (7,274,869) further in view of Erickson et al (6,882,765).

Considering claim 12, Chiu and Pan disclose the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving a signal from the router (**See Paragraph 17,45, fig. 3,6 i.e. fig. 3 illustrates that an OXC(OXC_B) communicating with a working router(100_{B1}) for transmitting data from the router**).

Chiu and Pan do not specifically disclose OXC working port is connected to the router in response to receiving an in-band signal from the router.

Erickson teaches the working port is connected to the router in response to receiving an in-band signal from the router. (**See abstract, Col. 23 line 17-27, fig. 17B i.e. in-band signaling between the working port of the OXC and router**).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Pan, and OXC working port to be connected to the router in response to receiving an in-band signal from the router, as taught by Erickson, thus allowing a means of minimizing the time to customer service interruption

during switching from the failed port to the protection port by having both ports in the same unit, as discussed by Erickson (**Col. 2 line 63-Col. 3 line 1**).

Considering claim 13, Chiu and Pan do not specifically disclose the optical cross connection system of claim 12, where the working port is connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router

Erickson teaches the optical cross connection system of claim 12, where the working port is connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router (**See Col. 19 lines 1-7, Col. 23 line 6-27, fig. 15 i.e. working port is connected to a router in case of a failure in primary path**).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Pan, and the OXC working port to be connected to the router in response to receiving a Synchronous Optical Network (SONET) signal from the router for the reason discussed in claim 12

Considering claim 14, Chiu and Pan do not specifically disclose the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving an out-of-band signal from the router.

Erickson teaches the optical cross-connection system of claim 11, where the working port is connected to the router in response to receiving an out-of-band signal from the router (**See Col. 2 lines 63-67 and Col. 3 lines 1-3, Col. 16 lines 28-46 i.e. working port is connected to a router in response to an out of bound signal**).

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Chiu and Pan, and the working port is connected to the

router in response to receiving an out-of-band signal from the router for the reason discussed in claim 12.

Conclusions

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIBRET A. WOLDEKIDAN whose telephone number is (571)270-5145. The examiner can normally be reached on Monday to Thursday from 8:00 a.m. - 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571)272-3078 . The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. W./

Examiner, Art Unit 2613

/Kenneth N Vanderpuye/

Supervisory Patent Examiner, Art Unit 2613

